

REMARKS

Claims 1-23 are pending in the Application. Claims 21-23 are withdrawn from consideration. By this Amendment, Applicants cancel claims 5, 13, and 20.

Preliminary Matters

Applicants thank the Examiner for accepting the drawings filed on November 29, 2005.

Applicants also thank the Examiner for acknowledging the claim for foreign priority and confirming receipt of the certified copy of the priority document.

Applicants also thank the Examiner for considering and initialing the Information Disclosure Statements filed November 29, 2005, July 18, 2007 and February 6, 2008.

Claim Objections

Claim 9 is objected to because of informalities. By this Amendment, Applicants amend claim 9 to depend only from claim 8.

Claim Rejections - 35 U.S.C. § 112 second paragraph:

Claims 8-9 and 13 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

By this Amendment, Applicants cancel claim 13 and amend claim 8 to clarify it. Applicants submit that as amended, claim 8 is sufficiently clear and definite. Applicants therefore request that the rejection be withdrawn. Applicants further submit that claim 9 is sufficiently clear and definite at least by virtue of its dependency from claim 8.

Claim Rejections - 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1-4, 6-7, 10-11 and 16-20 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Meynen (US Publication 2003/0001282).

Claims 5 and 8-9 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Meynen in view of Besser (US Publication 2001/0051420).

Claim 12 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Meynen in view of Yang (US Patent 7,132,363).

Applicants respectfully traverse.

By this Amendment, Applicants cancel claim 20, and submit that the rejections are moot with regard to claim 20.

Also by this Amendment, Applicants amend claim 1 to incorporate the features of claim 5, to remove the language “preferably” from the language of claim 5, and to correct the terminology of claim 5 to change “via interlayer film” to “third insulation film” and remove references to the first insulation film being overlaid. Applicants also correct the dependencies of claims 3, 6-8, 10-12, and 14-18, and amend claim 4 to clarify its language.

Applicants submit that Meynen and Besser teach away from one another. Specifically, Besser teaches making the dielectric layers 1420 and 1430 from either a variety of “high dielectric constant” materials which are inorganic (see paragraph [0050]) or “a variety of low K dielectric materials...Examples include Applied Material’s Black Diamond®, Novellus’ Coral®, Allied Signal’s Nanoglass®, and JSR’s LKD5104.” See paragraph [0051]. Applicants submit that these low K materials are either inorganic or porous. In comparison, Meynen uses an organic layer 1 including silicon and carbon, in order to seal a porous layer. See Meynen paragraph [0011] and FIG. 1. Applicants submit that combining Besser with Meynen as

suggested by the Examiner would destroy the functionality of Meynen. Applicants submit that a person having ordinary skill in the art would not have had any reason to combine the references in the manner suggested by the Examiner. Applicants submit that amended claim 1 is therefore patentable over the cited art.

Applicants further submit that Yang does not cure this deficiency. Therefore, Applicants submit that claims 2-4 and 6-18 are patentable over the cited art at least by virtue of their respective dependencies.

Regarding claim 19, by this Amendment Applicants amend claim 19 to correct a minor grammatical error and to specify the use of silicon carbonitride. Furthermore, Applicants submit that Meynen teaches a multi-layer wiring structure (see paragraph [0015]) wherein an etch stop layer 3 and a sacrificial hard mask layer 4 are formed over a porous dielectric layer 2. This etch stop layer and the sacrificial hard mask layer are selected from the same group of possible materials. See paragraphs [0035]-[0036]. In comparison, the claimed invention discloses that using the same material for the etch stop and the hard mask creates higher reliability. Applicants submit that, even if Meynen teaches that these layers may be selected from the same group of materials, there is no specific teaching in Meynen towards making the etch stop layer 3 and the sacrificial hard mask layer 4 out of the same material in any given embodiment. Additionally, Meynen, only specifies silicon nitride, silicon carbide, and silicon oxide as possible materials for the etch stop and the sacrificial hard mask. See paragraphs [0035]-[0036]. There is no mention of silicon carbonitride, which is recited in amended claim 19. Therefore, Applicants submit that claim 19 is patentable over the cited art.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicants do not believe such rewriting is necessary at this time.

By this Amendment, Applicants correct the dependencies of claims 14 and 15, and submit that these claims are patentable over the cited art at least by virtue of their respective dependencies.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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